CLAIMS

We claim:

5   1. A method for calculating and displaying the isothermal contours generated by a laser in a sample, the method comprising: applying a laser beam to the focal point of a sample, dividing the region near the focal point into cylinders coaxial with the beam, deriving the maximum temperature reached during the laser pulse of at least three points at arbitrary distances from the focal point, plotting the temperatures calculated as a

10   function of distance from the focal point sufficient to generate isothermal contours, and generating a computer display of said isothermal contours corresponding to the temperature calculations.

2. The method of claim 1, wherein the sample is placed in an isotropic medium and the

15   isothermal contours are displayed as rings centered around the focal point.

3. The method of claim 1, wherein a picture of the sample is displayed with the isothermal contours.

20   4. The method of claim 1, wherein the sample is the ZP of a pre-embryonic or embryonic cell.

5. The method of claim 1, wherein the temperature at the focal point is 140°C.

25   6.   The method of claim 1, where the isotherm rings are displayed as a color or grayscale graphic overlay on top of a live camera or video image.

7.   The method of claim 6, wherein the calculation and real time display of isotherm rings may be seen on a computer monitor and where changes in the corresponding laser

30   power and laser pulse time selected in the application program result in corresponding changes visible on the monitor.